

ABSTRACT OF THE DISCLOSURE

A method of crystallizing an amorphous silicon layer includes the steps of generating an excimer laser beam having a first energy density and a second energy density, irradiating an amorphous silicon layer with at least one exposure of the excimer, wherein the first energy density melts the amorphous silicon layer to a first depth from a surface of the amorphous silicon layer equal to the first thickness and the second energy density melts the amorphous silicon layer to a second depth from the surface of the amorphous silicon layer less than the first thickness.